The continued rejection of claims 1-13 over Gregoli et al. is once again respectfully traversed. The sections of Gregoli et al. that the examiner has identified in both the present Office Action and the Office Action of February 16, 2007 neither disclose nor suggest the invention recited in Applicant's claims. As previously noted, a limitation of the invention is the required inclusion of "an additive selected from the group consisting of liquid aliphatic C_{15}-C_{20} hydrocarbons and dialkyl ethers." None of the emulsifying agents in Gregoli et al. are chemical equivalents or analogs recognized among those skilled in the art as obvious variations of either of these two groups of compounds, nor would any of them be expected on the basis of their structure alone to function in the same manner as either of these two groups of compounds in the context of this invention.

Long-chain fatty acids, the first of the groups of Gregoli et al. that the examiner is identified, are not aliphatic hydrocarbons, despite any overlap in chain lengths. Fatty acids necessarily contain at least one carboxy (-CO_2H) group which gives the compounds their acid character, and the presence of the carboxy group affects the overall character of the molecule by imparting electronic properties to the structure which affect both its reactivity and its hydrophilicity/lipophilicity, including its ability to stabilize or de-stabilize emulsions. Aliphatic hydrocarbons do not contain carboxy groups. The accepted definition of the term "aliphatic" is found, for example, in *Hawley's Condensed Chemical Dictionary*, John Wiley & Sons (2001), at page 32, as follows:

> **aliphatic**. One of the major groups of organic compounds, characterized by straight- or branched-chain arrangement of the constituent carbon atoms. Aliphatic hydrocarbons comprise three subgroups: (1) paraffins (alkanes), all of which are saturated and comparatively unreactive, the branched-chain types being much more suitable for gasoline than the straight-chain; (2) olefins (alkenes or alkadienes), which are unsaturated and quite reactive; (3) acetylenes (alkynes), which contain a triple bond and are highly reactive. In complex structures, the chains may be branched or cross-linked.

Carboxy groups undergo reactions that differ considerably from those of either alkylenes or acetylenes, and no one skilled in the art would consider it obvious to remove a

carboxy group from a fatty acid and expect the activity and utility of the compound to remain the same or to be equivalent.

The disclosure by Gregoli et al. of long-chain fatty acids is even further removed from the scope of Applicant's claim 10, in which the additive is limited to mineral oil. Whatever emulsifying agents are disclosed by Gregoli et al., none are the equivalent of mineral oil, and mineral oil is clearly not recognized in the art as an emulsion stabilizer.

The second of the groups disclosed by Gregoli et al. that the rejection points to are "ether linkage" compounds as types of nonionic emulsifying agents. "Ether linkage" is an extremely broad term which, in view of its breadth, is interpretable as a prior art disclosure only in the context of the particular structural classes shown in support of the term. These classes appear at the top of column 10 as two generic formulae, both of which include a plurality of ethereal oxygen atoms and a requisite phenyl group as one of the groups bonded to one of the ethereal oxygen atoms. Each generic formula also include a chain of ethoxy groups that is only described as having four or more such groups (see lines 22-25 of column 19). Dialkyl ethers, by contrast, are simple molecules in which an alkyl group (which term does not include phenyl groups or further alkoxy moieties) occupies each of the two bonds on the oxygen atom. An alkyl group is defined on page 32 of *Hawley's Condensed Chemical Dictionary* (above) as:

> **alkyl**. A paraffinic hydrocarbon which may be derived from an alkane by dropping one hydrogen from the formula. Examples are methyl CH_3^+, ethyl $C_2H_5^+$, propyl $CH_3CH_2CH_2^+$, isopropyl $(CH_3)_2CH^+$. Such groups are often represented in formulas by the letter R and have the generic formula C_nH_{2n+1}.

Phenyl groups are distinct electronically and reactively from alkyl groups and in the manner in which they associate with other groups and compounds, and no one skilled in the art would consider it obvious to replace a phenyl group with an alkyl group and expect the activity and utility of the compound to remain the same or to be equivalent in all cases.

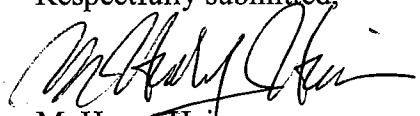
The "ether linkage" portion of the Gregoli et al. disclosure is even further removed from the scope of Applicant's claims 12 and 13, in which the additive is limited to diethyl ether, methyl t-butyl ether, methyl-n-propyl ether, and methyl isopropyl ether (claim 12), and (separately) to diethyl ether (claim 13). Whatever "ether linkages" are disclosed in or

suggested by Gregoli et al., none are the equivalent of these short-chain diakyl ethers, nor are any of these ethers recognized in the art as emulsion stabilizers.

CONCLUSION

In view of the foregoing, Applicant once again submits that all claims pending in this Application are in condition for allowance, and the withdrawal of all remaining rejections and the issuance of a Notice of Allowance are respectfully requested. Should any matters remain that can be resolved by a conference with Applicant's attorney, the Examiner is encouraged to telephone the undersigned at 415-576-0200.

Respectfully submitted,



M. Henry Heines
Reg. No. 28,219

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 415-576-0200
Fax: 415-576-0300
MHH:mhh
61101758 v1